GOVERNMENT OF INDIA
NON-CONVENTIONAL ENERGY SOURCES
LOK SABHA

UNSTARRED QUESTION NO:666
ANSWERED ON:21.11.2002
DEVELOPMENT OF SOLAR AIR CONDITION SYSTEM
DR. KIRIT SOMAIYA

Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) whether the Government have taken note of a new research, development of solar air condition system;

(b) if so, the details, thereof;

(c) whether the system has been developed in foreign countries;

(d) the details of the efforts being taken to develop the same; and

(e) the details of the government policy in this regard?

Answer

MINISTER OF STATE FOR NON-CONVENTIONAL ENERGY SOURCES (SHRI M. KANNAPPAN)

(a) (b) & (c): Research & development has been pursued for many years in several countries to develop reliable and cost effective solar cooling systems for airconditioning and refrigeration. The systems developed so far include:

- Vapour absorption/adsorption refrigeration systems based on solar thermal energy
- Vapour compression refrigeration systems based on solar electricity
- Solar assisted desiccant cooling.

In the country, work is currently being pursued in IIT Bombay, IIT Madras and Tata Energy Research Institute both on absorption and adsorption based systems mainly for refrigeration purposes.

Several prototype systems based on the above principles have been made and demonstrated both in the country and elsewhere. Though the technical feasibility of solar cooling systems could be established, their reliability, economics and commercial viability are still to be improved.

(d): Several R&D projects have been funded by the Ministry to various R&D organizations for basic studies in the area and also for development of solar refrigeration and airconditioning systems. Some demonstration projects based on different principles have been installed for field performance evaluation.

(e): Solar refrigeration and airconditioning has been identified as one of the thrust areas under the Research & Development programme of the Ministry. Provision has been made for 50% cost sharing by the government for demonstration projects in the area for trying out various concepts under actual field conditions. Efforts are also being made under the Solar Buildings programme of the Ministry to introduce solar assisted building design principles for reducing cooling and heating loads of buildings.